

Acute inflammations of the middle ear having been diagnosed, dry heat should be applied over the ear. This often brings about resolution. All forms of instillations should be avoided. They are rarely endured by the inflamed ear, and they may excite further inflammation. If pain increases under dry heat, and spontaneous rupture is delayed for six or eight hours, then there is only one thing to do, viz., incise the drum membrane at its most inflamed and protuberant point. This may be done under general anæsthesia, especially in a child, if its general condition permits. But if the surgeon knows how to do it, it is not a painful operation. Scraping the auditory canal in performing paracentesis is more painful than paracentesis itself, as the membrana is not as sensitive as the skin of the auditory canal. The discharge may not flow copiously for an hour after paracentesis, especially if the latter has been delayed until inspissation of secretion has occurred. After paracentesis or spontaneous rupture and the occurrence of discharge from the ear, let the ear alone, so that it may drain itself. Matter as it appears at the meatus may be gently mopped, not swabbed, away with absorbent cotton or sterilized gauze. Swabbing irritates the canal and causes furuncles. Syringing is rarely, if ever, demanded, and peroxide of hydrogen never.

If these latter applications are made to the acutely inflamed ear, mastoiditis usually results, and hence the large and increasing numbers of reported cases of acute mastoiditis secondary to acute otitis. If syringing and the use of peroxide of hydrogen are avoided, especially the latter, there will be no mastoiditis consecutive to acute otitis media. The former lesion is purely artificial and unnecessary, according to my experience.—ED.]

The pernicious results of the poultice-treatment and use of Politzer inflation in acute otitis media, resulting in secondary infection of the mastoid and production of mastoiditis, are well demonstrated by two cases reported by J. H. BRYAN (*Journal American Medical Association*, March 5, 1898). In one of these cases gravitation of pus from the mastoid into the neck had begun. Both cases finally recovered after mastoid trepanation by chiselling.

Indications for Trepanation of the Mastoid Process.—The indications for opening the mastoid when diseased in consequence of chronic purulent otitis media are comparatively easy; the indications for opening the mastoid when it is diseased in consequence of acute otitis media are, as a rule, extremely difficult. E. RIMINI (*Berlin. klin. Woch.*, March 14, 1898) assumes that in every case of acute otitis media there is a simultaneous purulent infiltration of at least the aditus and the antrum, if not of all the mastoid cells, as has already been pointed out by Politzer and others, and accepted by all aurists of experience. Consequently, in all cases of acute otitis media there is tenderness of the mastoid on pressure, without any other external symptoms in the cortex. But this fact alone does not warrant opening the antrum in every case of acute otitis media, for we all know that under cautious, conservative antiseptic and aseptic treatment the vast majority of acute otitides recover entirely without mastoid interference.

The course, however, of acute purulent otitis media is not always so favorable; sometimes, especially if the treatment of the primary acute disease has been defective, the pains in the mastoid increase and are felt not only

on pressure, but occur spontaneously. "Inflammatory œdema of the mastoid ensues, the auricle is pushed forward, and to these objective symptoms there are added headache, elevation of temperature, and in some cases chills. This is a group of symptoms demanding immediate surgical interference, for it shows that an abscess has formed in the mastoid. Since such abscesses tend to spread, the proximity of mastoid empyema to the brain is a menace to the entire organism." (Rimini.)

We may deduce that, as a rule, empyema of the mastoid cells arises from empyema of the antrum, which is really part of the drum cavity. From that point sometimes the empyema extends downward and backward to the mastoid cells. It must be borne in mind that periostitis of the mastoid process consequent to an otitis externa that often accompanies an acute purulent otitis media can also produce inflammatory œdema of the skin of the mastoid and projection of the auricle, often accompanied, also, by headache and fever, and thus give rise to the suspicion of the presence of an empyema in the mastoid. But the rapid disappearance of these symptoms upon antiphlogistic treatment of the external ear and skin of the mastoid lead to a differential diagnosis. Unfortunately, however, a mastoid abscess does not always occur with such marked and characteristic symptoms, but runs a "latent" course with uncertain symptoms. We are then obliged, as Rimini shows, to depend for the diagnosis of mastoid empyema upon other symptoms, such as continuance and increase of the discharge beyond four or five weeks, when there is no dyscrasia present to account for it, comparatively insensitive prolapse of the posterior superior wall of the auditory canal near the membrana, and sometimes headache, though the latter is likely to be absent if the drainage from the mastoid through the antrum and middle ear into the auditory canal is good. In the latter instance, however, instead of headache, there will be a sense of fulness in the head, this latter symptom alternating with attacks of headache of more or less severity. In other words, if mastoid disease in connection with either acute or chronic purulent otitis media is attended with well-marked objective or subjective symptoms, especially the former, the diagnosis is easy. If antro-mastoid disease is not thus attended with well-marked objective symptoms, but is of the so-called "latent" variety, it may puzzle the most expert diagnostician of ear diseases. Whether or not we are justified in an exploratory operation in all doubtful cases, both acute and chronic, remains to be seen.

Otic Cerebral Abscesses.—F. MARSH (*British Medical Journal*, April 30, 1898) reports five cases of cerebral abscess from chronic purulent otitis media. Three were uncomplicated abscesses in the temporo-sphenoidal lobe, and diagnosed as such for the following reasons: 1. A long history in each case of the chronic purulent ear disease, twenty-five, fourteen, and nine years respectively. 2. No mastoid tenderness excepting in one case, and no tenderness on percussion over the sigmoid sinus. 3. No thrombosis of the internal jugular vein. 4. No high or greatly varying temperatures, and pulse not rapid. 5. Absence of pyæmic symptoms, in the main. 6. Cerebration little affected in the early stages, but becoming slow later. 7. Marked emaciation. 8. A chronic course terminating in coma. The abscess in these cases was deemed temporo-sphenoidal rather than cerebellar, because